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MARK D. SARALINO (GENERAL) RENNER, OTTO, BOISELLE & SKLAR, LLP 1621 EUCLID AVENUE, NINETEENTH FLOOR CLEVELAND, OH 44115-2191			FLEARY, CAROLYN FATIMAH	
			ART UNIT	PAPER NUMBER
			2152	

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,356

Applicant(s)

CHENG ET AL.

Examiner

Carolyn F. Fleary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/10/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/02/2002.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 2 recites the limitation "the status information" in line 11. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 3 recites the limitation "the Quality of Service" in line 3 and "the designation" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claim 1-2, 4-7, 13-15, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Scott et al. (US 6,760,324).**

In regards to claim 1, Scott et al. discloses a Voice-over-Internet Protocol (VOIP)

system(fig. 2-#200, col. 6 lines 22-29), comprising:

- a network(fig 2-#215) configured to allow voice data to be transmitted and received over the network (col. 6 lines 54-55, col. 14 lines 49-50) wherein the network includes a routing server (fig 2-#230) configured to automatically determine and identify a termination PSTN gateway from a plurality of termination PSTN gateways (fig. 2:#210 & #220, col. 16 lines 22-25);

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- at least one VOIP client (fig 2-#201) operatively coupled to the network to transmit and receive voice data over the network (col. 6 lines 30-42); wherein the at least one VOIP client connects to the termination PSTN gateway (fig 2-#210 & 220) in order to transmit and receive voice data; and
- one or more of a gateway monitor (fig. #210, col. 16 lines 48-56) configured to provide to the routing server (fig 2-#230, col. 16 lines 36-43) the status information on the plurality of termination (col. 14 lines 51-52) PSTN gateways (col. 9 lines 1-7), a routing cost policy server (fig 2-#240, col. 8 lines 52-67) configured to provide to the routing server cost information (col. 8 lines 56-58, col. 9 lines 19-30, col. 47 lines 64-67, col. 48 lines 1-2; col. 62 line 32) or a routing plan database(col. 98-105) from which the routing server may extract information on the at least one VOIP client.

In regards to claim 2 Scott et al. discloses the VOIP system (fig. 1-#100) according to claim 1, further including:

- at least one network connection (fig. 2-#215) coupled to the routing server (fig. 2-#230, col. 9 lines 1-7, col. 8 lines 59-67, col. 16 lines 37-39) and the one or more of the gateway monitor(fig. #210, col. 16 lines 48-56), the routing cost policy server(fig 2-#240), or the routing plan database for sharing information (i.e. data in databases col. 98-105) there between (col. 6 lines 42-53) and the information is used to determine which termination PSTN gateway of the plurality of termination PSTN gateways (fig. 2: #210 & #220, col 8 lines 52-58) the at least one VOIP client connects to in order to transmit and receive voice data (col. 6 lines 54-60).

In regards to claim 4, Scott et al. discloses the VOIP system according to claim 1, wherein the at least one VOIP client (fig. 2-#291) is categorized in a caller group (col. 55 lines 36; 34-47, col. 61 lines 24-39, col. 62 lines 11-13, col. 74 lines 40-47) and the caller group is used by the routing server to determine and identify the termination PSTN gateway (col. 56 lines 23-27, col. 60 lines 57-61). Scott et al. teaches a plurality of caller groups: Lines (col. 55 lines 36), Rule-based(col. 60 lines 2-14), Privilege based (col. 61 lines 24), location (col. 62 lines 11, col. 74 lines 40), Group ID (col. 77 lines 65-67).

In regards to claim 5, Scott et al. discloses the VOIP system according to claim 4, wherein the caller group is categorized by one or more of a location (col. 62 lines 11-13, col. 74 lines 40-47), a priority, a business entity association, or a membership of the client.

In regards to claim 6, Scott et al. discloses the VOIP system according to claim 4, further including a routing plan (col. 77 lines 32-39) associated with the caller group (col. 55 lines 36; 34-47, col. 61 lines 24-39, col. 62 lines 11-13, col. 74 lines 40-47) and the routing plan is used by the routing server to determine (i.e. rule matching col. 60 lines 2-14) and identify the termination PSTN gateway (col. 8 lines 51-56).

In regards to claim 7, Scott et al. discloses the VOIP system according to claim 4, further including a default routing plan associated with the caller group and the default routing plan is used by the routing server to determine and identify the termination PSTN gateway (col. 61 lines 24-40, col. 67 lines 58-67).

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In regards to claim 12 Scott et al. discloses the VOIP system according to claim 1 , wherein the routing plan database is coupled to the routing server(fig 2-#240,245 215, 230) and shares information therebetween, the information is used by the routing server to determine which termination PSTN gateway of the plurality of termination PSTN gateways the at least one VOIP client connects to in order to transmit and receive voice data(col. 6 lines 30-57, col. 9 lines 19-38)

In regards to claim 13, Scott et al. discloses the VOIP system according to claim 1 , wherein the routing plan database is coupled to the routing cost policy server in order to share information therebetween and the routing cost policy server is coupled to the routing server to share information therebetween (col. 8 lines 56-58, col. 9 lines 19-30, col. 62 line 32 – 67, col. 63 line 1-55)and the information is used to determine which termination PSTN gateway of the plurality of termination PSTN gateways the at least one VOIP client connects to in order to transmit and receive voice data (col. 6 lines 30-57, col. 9 lines 19-38)

In regards to claim 14, Scott et al. (US 6,760,324) discloses a method for connecting at least one Voice-over-Internet Protocol (VOIP) client (fig. 2-293, col. lines 30-42) to a VOIP system (fig. 2-#200, col. 6 lines 22-29), wherein the VOIP system comprises a network including a routing server (fig 2-#230, col. 16 lines 36-43), and one or more of a gateway monitor (fig. 2-#210, col. 16 lines 48-56) a routing cost policy server (fig. 2-#240) or a routing plan database; comprising the steps of:

- (a) automatically determining and identifying a termination PSTN gateway from a plurality of termination PSTN gateways based on information provided by the one or more of the gateway monitor(fig. #210, col. 16 lines 48-56), the routing cost policy

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server (col. 8 lines 56-58, col. 9 lines 19-30, col. 47 lines 64-67, col. 48 lines 1-2; col. 62 line 32) or the routing database; and

(b) connecting of the at least one VOIP client to the termination PSTN gateway in order to transmit and receive voice data (col. 6 lines 54-60, col. 8 lines 59-67, col. 16 lines 37-39).

In regards to claim 15 Scott et al. discloses the method of claim 15, further including the step of:

(c) sharing information (i.e. data in databases col. 98-105) between the plurality of termination PSTN gateways and the routing server wherein the information (col. 6 lines 42-53) is used by the routing server (fig. 2-#230, col. 9 lines 1-7, col. 8 lines 59-67, col. 16 lines 37-39) to determine which termination PSTN gateway of the plurality of termination PSTN gateways (fig. 2: #210 & #220, col. 8 lines 52-58) the at least one VOIP client (fig. 2-293) connects to in order to transmit and receive voice data (col. 6 lines 54-60).

In regards to claim 18, Scott et al. discloses the method of claim 14, further including the step of categorizing the at least one VOIP client into a caller group(col. 55 lines 36; 34-47, col. 61 lines 24-39, col. 62 lines 11-13, col. 74 lines 40-47) wherein the caller group is used by the routing server to determine and identify the termination PSTN gateway (col. 56 lines 23-27, col. 60 lines 57-61). Scott et al. teaches a plurality of caller groups Lines (col. 55 lines 36), Rule-based(col. 60 lines 2-14), Privilege based (col. 61 lines 24), location (col. 62 lines 11, col. 74 lines 40), Group ID (col. 77 lines 65-67)

In regards to claim 19 Scott et al. discloses the method of claim 18, further including the step of:

(g) identifying a routing plan (col. 77 lines 32-39)associated with the caller group (col. 55 lines 36; 34-47, col. 61 lines 24-39, col. 62 lines 11-13, col. 74 lines 40-47) and the routing plan is used by the routing server to determine i.e. rule matching (col. 60 lines 2-14) and identify the termination PSTN gateway (col. 8 lines 51-56).

In regards to claim 20, Scott et al. discloses the method of claim 18, further including the step of identifying a default routing plan associated with the caller group and the default routing plan is used by the routing server to determine and identify the termination PSTN gateway (col. 61 lines 24-40, col. 67 lines 58-67)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 9-11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US 6,760,324) in view of Scott et al. (US 6,480,898). Hereinafter Scott et al. (US 6,480,898) will be referred to as Scott(2) and Scott et al. (US 6,760,324) will be referred to as Scott.

In regards to claim 3 Scott et al. discloses a VOIP system according to claim 1, wherein the plurality of termination PSTN gateways are configured in a plurality of termination PSTN gateway groups (col. 84 lines 42-63). However Scott et al. fails to teach designating gateway groups based on the Quality of Service; a designation that is used by the routing server to determine and identify the termination PSTN gateway.

Scott(2) discloses a system for a predicting call quality prior to the establishment of any call in VOIP network (col. 9 lines 7-14). Scott(2) teaches a plurality of termination gateways configured in a plurality of gateway groups (i.e. carriers in lines [col. 4 lines 46-54, col. 7 lines 10-17]) which are designated based on Quality of Service (col. 7 lines 22-38; 47-48) and the designation is used by the routing server (fig. 1-#102, col. 5 lines 42-45) to determine and identify a termination PSTN gateway (col. 8 lines 36-54).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous to modify Scott et al. by having a routing server determine and identify termination PSTN gateways based on quality of service of gateway groups, as taught by Scott(2), in order to have a router management system monitor and provide quality based routing services in a VOIP network. (See Scott (2) col. 3 lines 34-48, col. 9 lines 1-26).

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In regards to claim 9 Scott et al. discloses the VOIP system according to claim 1, however Scott et al. fails to disclose wherein the gateway monitor continuously monitors the plurality of termination PSTN gateways for status information.

Scott(2) teaches a gateway monitor (fig. 1-#114a..n, col. 7 lines 29-38) monitors the plurality of termination gateways (fig 1-#10a..n).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous to modify Scott et al. to monitor for status information as taught by Scott(2) et al. in order to enable Quality of Service measurements and determining if a particular gateway are functional (See Scott(2) col. 7 lines 29-38;46-48).

In regards to claim 10 Scott et al. discloses the VOIP system according to claim 1, however Scott et al. fails to disclose wherein the gateway monitor polls the plurality of termination PSTN gateways for status information. Scott(2) teaches the interrogation of gateways by gateway monitors (fig. 1-#114a..n) to determine status information (col. 7 lines 29-38)

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous to modify Scott et al. to poll for status information as taught by Scott(2) et al. in order to enable collecting of Quality of Service measurements and determining if a particular gateway are functional (See Scott(2) col. 7 lines 29-38; 46-48).

In regards to claim 11, Scott et al. discloses the VOIP system according to claim 1 , however Scott et al. fails to disclose wherein the status information includes one or more of a health status, a carrier termination cost, a Quality of Service of a termination PSTN gateway, a termination PSTN gateway malfunction indication, a network supporting the termination PSTN gateway status, or the availability of resources of the termination PSTN gateway.

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Scott(2) et al. discloses status information as Quality of Service of a termination PSTN gateway (col. 7 lines 29-38; 46-48, col. 9 lines 27).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous to modify the Scott et al. to have status information that includes Quality of Service of a termination PSTN gateway in order to enable collecting of Quality of Service measurements and determining if a particular gateway are functional (See Scott(2) col. 7 lines 29-38; 46-48).

In regards to claim 16 Scott et al. discloses the method of claim 14, further including the steps of:

(d) configuring the plurality of termination PSTN gateways into a plurality of termination PSTN gateway groups (col. 84 lines 42-63);

Scott et al. fails to disclose:

(e) designating the plurality of termination PSTN gateway groups based on the Quality of Service; and

(f) using the designation to determine and identify the termination PSTN gateway.

Scott(2) et al. discloses a system for a predicting call quality prior to the establishment of any call in VOIP network (col. 9 lines 7-14). Scott teaches a plurality of termination gateways configured in a plurality of gateway groups (i.e. carriers in lines [col. 4 lines 46-54, col. 7 lines 10-17]) which are designated based on Quality of Service (col. 7 lines 22-38; 47-48) and the designation is used by the routing server (fig. 1-#102, col. 5 lines 42-45) to determine and identify a termination PSTN gateway (col. 8 lines 36-54).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous to modify Scott et al. by having a routing server determine and

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identify termination PSTN gateways based on quality of service of gateway groups, as taught by Scott(2), in order to have a router management system monitor and provide quality based routing services in a VOIP network. (See Scot (2) col. 3 lines 34-48, col. 9 lines 1-26).

8. Claim 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US 6,760,324) as applied to claim 1 and 14 respectively above, and further in view of Ma et al.(US 6,795,867).

In regards to claim 8 Scott et al. discloses the VOIP system according to claim 1 and , however fails to disclose wherein the routing server identifies the termination PSTN gateway based on workload data.

Ma et al. discloses a VOIP system (fig. 2-3) wherein a routing server (i.e. LMU fig. 2- #220) identifies the termination PSTN gateway (fig. 2- #236) based on workload data (col. 4 lines 29-38, col. 7 lines 8-22).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous for to modify Scott et al. to identify termination gateways base on workload data, as taught by Ma et al., in order to distribute load among gateways when an assigned gateways are overloaded and unavailable (See Ma et al. col. 4 lines 29-38, col. 7 lines 8-22)

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In regards to claim 17 Scott et al. discloses the method of claim 14, however Scott et al. fails to disclose further including the step of identifying the termination PSTN gateway based on workload data received by the routing Server.

Ma et al. discloses a method for connection at least one VOIP client to a VOIP system (fig. 2-3) wherein a routing server (i.e. LMU fig. 2-#220) identifies the termination PSTN gateway (fig. 2- #236) based on workload data (col. 4 lines 29-38, col. 7 lines 8-22).

One of ordinary skill in the art at the time of invention would have clearly recognized that it is quite advantageous for to modify Scott et al. to identify termination gateways base on workload data, as taught by Ma et al., in order to distribute load among gateways when an assigned gateways are overloaded and unavailable. (See Ma et al. col. 4 lines 29-38, col. 7 lines 8-22)

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

VOIP Systems and QoS Considerations

- Thornton; Timothy R. et al. (US 6363065)okApparatus for a voice over IP (voIP) telephony gateway and methods for use therein
- Elliott; Isaac K. et al. (US 6614781) Voice over data telecommunications network Architecture

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- Bennefeld; Brian Joseph et al. (US 6519249) Scalable gatekeepers in an internet telephony system and a method of operation
- Doshi; Bharat Tarachand et al. (US 6529499) Method for providing quality of service for delay sensitive traffic over IP networks
- Akhtar; Shahid (US 6418139) Mechanism to guarantee quality of service to real-time traffic on IP networks

VOIP and Load Balancing Considerations

- Blair; Dana (US 6738824) Dial-out link selection via static route redistribution
- Bartholomew; Dale L. et al. (US 6122255) Internet telephone service with mediation

VOIP and Troubleshooting Techniques

- Garakani; Mehryar et al (US 6781959) Method and apparatus for determining troubleshooting information for completed calls in a telecommunications network

VOIP and Cost Effectiveness

- Neyman; Igor (US 6215783) Private IP telephony backbone linking widely-distributed enterprise sites

Routing techniques

- Gossett Dalton, Jr.; James Pleasant et al. (US 6426955) Internet telephony call routing engine
- Miloslavsky; Alec (US 5953405) Agent-predictive routing process in call-routing systems
- Brewster; James A. et al. (US 5870464) Intelligent information routing system and method

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn F. Fleary whose telephone number is (571) 572-7218. The examiner can normally be reached on 8:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Carolyn F Fleary
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Art Unit 2152

CFF


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